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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/818,378	03/27/2001	John B. Terry	0960-017	1681
26108	7590	03/30/2005	EXAMINER	
DANIELS DANIELS & VERDONIK, P.A. SUITE 200 GENERATION PLAZA 1822 N.C. HIGHWAY 54 EAST DURHAM, NC 27713			DUONG, FRANK	
			ART UNIT	PAPER NUMBER
			2666	

DATE MAILED: 03/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action SummaryApplication No. **09/818,378**

Applicant(s)

TERRY, JOHN B.

Examiner

Frank Duong

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2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date all considered.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

AILED ACTION

1. This Office Action is a response to the Preliminary Amendment dated 07/31/03. Claims 1-18 are pending in the application.

Information Disclosure Statement

2. The information disclosure statement filed 8/8/8, 8/1/3/, 5/5/3, 7/16/2, /6/3/2, 3/25/2, 9/27/1, 7/2/1 and 4/19/1 comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609. They have been considered and placed in the application file.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "328" has been used to designate both "data hub" (specification; page 7, line 25) and "proxy server" (specification; page 8, line 14). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities:

The specification fails to describe element 340 the figure.

Appropriate correction is required.

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: *"a) establishing a target level ... towards the target lever"*, in claim 1; *"a) comparing the measured signal strength ... below the target level"*, in claim 2; *"h) measuring the received signal strength ... the target level"*, in claim 5; *"an infrared transceiver"* in claim 9; *"c) a measurement circuit to measure the signal strength ... modem"* and *"g) a means to provide signal strength feedback ... the particular modem"*, in claim 12; *"a) setting a target ... the target level"* in claim 15; *"a) setting a target ... the target level"* in claim 16; and *"a) setting a target level ... particular remote modem"* in claim 17; and *"l) The communication hub sending a downstream data ... signal strength feedback to indicate to the particular remote modem whether the last upstream communication from that particular remote modem received by the RF modem was below the target level for signal strength"*, in claim 18.

Claim Objections

6. Claim 6 is objected to because of the following informalities: Line 3, *"an central modem"* should read *--a central modem--*. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1-5, 9, 11 and 12-18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

As per claims 1-5, there is no support for the claimed limitations of "a) *establishing a target level ... towards the target lever*" in claim 1; "a) *comparing the measured signal strength ... below the target level*" in claim 2; "h) *measuring the received signal strength ... the target lever*" in claim 5, in the specification. In accordance with the specification, on page 10, lines 10-27, in reference to FIG. 1, it is disclosed "*Path losses between each client modem ... Each time a data burst is sent to a client modem 408 an extra bit is included which indicates if the previous transmitted burst from that client modem was above or below the ideal level required at the receiver within the central RF modem 332. This bit is used by the client modem 408 to slightly adjust, either upward or downward, the level of its next transmitted burst ... intrinsically stable*". From the disclosed features, the claimed limitations of "a) *establishing a target level ... towards the target lever*", in claim 1; "a) *comparing the measured signal strength ... below the target level*", in claim 2; "h) *measuring the received signal strength*

... *the target level*", in claim 5, cannot unambiguously derive to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

As per claims 9 and 11, there is no support for the claimed limitation of "*an infrared transceiver*" in the specification. In accordance with the specification, on page 11, lines 5-16, it is disclosed "*a client modem receiver that uses tuner/demodulator chipsets commonly used in satellite set-top boxes ... very little power*". From the disclosed features, the claimed limitation of "*an infrared transceiver*" in claims 9 and 11 cannot unambiguously derive to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

As per claims 12-16, there is no support for the claimed limitations of "(c) a measurement circuit to measure the signal strength ... modem" and "(g) a means to provide signal strength feedback ... the particular modem", as recited in claim 12. In accordance with the specification, on page 7, lines 15-26, it is disclosed "*In cluster 300, the incoming signal ... the bypass loop*". From the disclosed features, the claimed limitations of "(c) a measurement circuit to measure the signal strength ... modem" and "(g) a means to provide signal strength feedback ... the particular modem", as recited in claim 12, cannot unambiguously derive to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

As per claims 15-17, there is no support for the claimed limitations of "a) *setting a target ... the target level*" in claim 15; "a) *setting a target ... the target level*" in claim 16; and "a) *setting a target level ... particular remote modem*" in claim 17. In accordance with the specification, on page 10, lines 10-27, in reference to FIG. 1, it is disclosed "*Path losses between each client modem ... Each time a data burst is sent to a client modem 408 an extra bit is included which indicates if the previous transmitted burst from that client modem was above or below the ideal level required at the receiver within the central RF modem 332. This bit is used by the client modem 408 to slightly adjust, either upward or downward, the level of its next transmitted burst ... intrinsically stable*". From the disclosed features, the claimed limitations of "a) *setting a target ... the target level*" in claim 15; "a) *setting a target ... the target level*" in claim 16; and "a) *setting a target level ... particular remote modem*" in claim 17, cannot unambiguously derive to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

As per claim 18, there is no support for the claimed limitations of "l) *The communication hub sending a downstream data ... signal strength feedback to indicate to the particular remote modem whether the last upstream communication from that particular remote modem received by the RF modem was below the target level for signal strength*". In accordance with the specification, on page 7, lines 15-26, it is disclosed "*In cluster 300, the incoming signal ... the bypass loop*". Also, in accordance with the specification, on page 10, lines 10-27, in reference to FIG. 1, it is further disclosed "*Path losses between each client modem ... Each time a data burst is sent to*

a client modem 408 an extra bit is included which indicates if the previous transmitted burst from that client modem was above or below the ideal level required at the receiver within the central RF modem 332. This bit is used by the client modem 408 to slightly adjust, either upward or downward, the level of its next transmitted burst ... intrinsically stable". From the disclosed features, the claimed limitations of "I) The communication hub sending a downstream data ... signal strength feedback to indicate to the particular remote modem whether the last upstream communication from that particular remote modem received by the RF modem was below the target level for signal strength", cannot unambiguously derive to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 6-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claims 6-11, the term "*adapted to*" recites no positive limitation. The language "*adapted to*" suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure. Thus, the claims are deemed to be indefinite.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 6-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Eldering et al (USP 5,881,362) (hereinafter "Eldering").

Regarding **claims 6-11**, the language "*adapted to*" suggests or makes optional but does not require steps to be performed. Therefore, any modem in a cable television system to include Eldering would have anticipated the claimed invention. However, should the Applicant, in a response to this Office Action, amend the claims to recite positive limitation, the following rejection would have applied:

Regarding **claim 6**, in accordance with Eldering reference entirety, Eldering discloses a client modem (Fig. 1; element 25) for use in a passive multipoint distribution network (cable television network (col. 4, lines 41-53) wherein the client modem is adapted to transmit data upstream along the distribution network to a central modem (not shown; inherent) (col. 6, lines 27-28); receive data transmitted downstream from the central modem (col. 6, lines 28-29); determine if the transmitted data is addressed to the client modem (col. 6, lines 35-36 or inherent in TDMA); and respond to control data sent with the transmitted data addressed to the client modem to adjust the output level of the next transmission of data upstream to the central modem (col. 6, lines 35-36).

Regarding **claim 7**, in addition to features recited in base claim 6 (see rationales discussed above), Eldering further discloses a variable gain stage (190) provided in the client modem (25) to maintain a desired signal-to-interference ratio through a control command from receiving from a headend (col. 6, lines 32-47).

Regarding **claims 8 and 10**, in addition to features recited in base claim 6 (see rationales discussed above), Eldering also shows the structure of the cable television network (Fig. 1) as set forth in the claimed features. As for the claimed limitation of *"adapted to a polling signal from central modem providing permission for that particular client modem to conduct an upstream transmission"*, it is inherent in a TDMA system to include a MAP message to let subscribers know when to transmit. Eldering's system is the TDMA system (col. 6, lines 40-41).

Regarding **claims 9 and 11**, in addition to features recited in base claim 6 (see rationales discussed above), Eldering also shows wherein the client modem includes a transceiver for communication with a similarly equipped device (*Fig. 1; settop box 25*) (*note: any mode of transmission from settop box 25 to the headend deviated from regular coaxial cable would be a design choice*).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eldering.

Regarding **claim 1**, in accordance with Eldering reference entirety, Eldering discloses a method of reducing noise and ingress in cable return paths of cable television systems comprising headend (not shown) and subscriber resident (21) (see *the Abstract; Figure 1, col. 4, line 38 and thereafter*) having media access control (186) performing the functions of receiving downstream messages and generating return messages, as well as forming the packets for transmission and adjusting a local clock in synchronizing with a headend clock (see col. 6, lines 15-32). Eldering fails to explicitly disclose the claimed steps of "a) establishing a target level ... towards the target level". However, at col. 6, lines 34-49, Eldering discloses "*A closed loop control system in which the headend senses the power in the receive packets is used to determine if a particular settop needs to increase or decrease power in its return transmissions*". In the same passage, Eldering further discloses "Such control loops are typically used in point-to-multipoint communication systems and can be applied to all type of multiple access schemes" to include TDMA (time division multiple access). From the passage, a skilled artisan would have recognized that Eldering's teaching would encompass the claimed steps or would be able to derive a closed loop control method to include the claimed steps to limit the amount of noise in the return path in cable television systems (col. 2, lines 41-44).

Thus, it would have been obvious to those skilled in the art, having Eldering reference readily available, at the time of the invention was made to derive a closed

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loop control method from Eldering's teaching to arrive the claimed invention with a motivation to limit the amount of noise in the return path in cable television systems (col. 2, lines 41-44).

Regarding **claim 4**, in addition to features recited in base claim 1 (see rationales discussed above), Eldering further discloses wherein the feedback to the first remote modem is provided with a downstream data transmission addressed to the first remote modem (see col. 6, lines 26-48 and col. 7, lines 10-17).

Regarding **claim 5**, in addition to features recited in base claim 1 (see rationales discussed above), Eldering further discloses headend senses the power in the received packets is used to determine if a particular settop needs to increase or decrease the power in its return transmission (col. 6, lines 35-37) and the transmitters in the residence are controlled from the headend using a closed loop feedback system, so that the power in the actives and return laser is kept at a specified level (col. 7, lines 11-13). The recitation thereat obviously anticipates the claimed steps as set forth in the claim.

(note: there is no art applied to determine the allowability of the remaining claims at this time).

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Leano et al (USP 6,453,472).

Hrastar et al (USP 6,249,523).

Schwartzman et al (USP 6,385,773).

Chen et al (USP 5,943,604).

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Duong whose telephone number is 571-272-3164. The examiner can normally be reached on 7:00AM-3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Frank Duong
Primary Examiner
Art Unit 2666

March 28, 2005